SEQUENCE LISTING

<110> LIU, CHUAN-FA FEIGE, ULRICH CHEETHAM, JANET BOONE, THOMAS CHARLES

<120> MODIFIED PEPTIDES AS THERAPEUTIC AGENTS

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<141> 1999-10-22

<150> 60/105,371

<151> 1998-10-23

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ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc 96
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc 144
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu

50 ... 55 60

gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc acg 240

| Val 65 | His | Asn | Ala | Lys | Thr 70 | Lys | Pro | Arg | Glu | Glu 75 | Gln | Tyr | Asn | Ser | Thr 80 | |
|-------------------|-----|-------------------|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| | - | gtg Val | • | - | - | | | • | - | | _ | - | | - | | 288 |
| | _ | gag Glu | | _ | _ | _ | - | | | | - | | | _ | | 336 |
| | | aaa Lys 115 | Thr | | | | • | | | _ | | - | _ | | _ | 384 |
| | | acc Thr | _ | | | | | - | | | | | | | | 432 |
| - | _ | acc Thr | • | _ | _ | | | | | | _ | _ | | _ | | 480 |
| | | gag Glu | | | | | | | | | | | | | | 528 |
| | | ctg Leu | - | | - | | | | | | | | | | | 576 |
| gtg Val | | | | | | | | | | | | | | | | 624 |
| atg Met | | | | | | | | | | | | | | | | 672 |
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| Met 1 | Asp | Lys | Thr | His 5 | | Cys | Pro | Pro | Cys 10 | Pro | Ala | Pro | Glu | Leu 15 | Leu |
| Gly | Gly | Pro | Ser 20 | Val | Phe | Leu | Phe | Pro 25 | Pro | Lys | Pro | Lys | Asp 30 | Thr | Leu |
| Met | Ile | Ser 35 | Arg | Thr | Pro | Glu | Val 40 | Thr | Cys | Val | Val | Val 45 | Asp | Val | Ser |
| His | Glu 50 | Asp | Pro | Glu | Val | Lys 55 | Phe | Asn | Trp | Tyr | Val 60 | Asp | Gly | Val | Glu |
| Val 65 | His | Asn | Ala | Lys | Thr 70 | Lys | Pro | Arg | Glu | Glu 75 | Gln | Tyr | Asn | Ser | Thr 80 |
| Tyr | Arg | Val | Val | Ser 85 | Val | Leu | Thr | Val | Leu 90 | His | Gln | Asp | Trp | Leu 95 | Asn |
| Gly | Lys | Glu | Tyr 100 | Lys | Cys | Lys | Val | Ser 105 | Asn | Lys | Ala | Leu | Pro 110 | Ala | Pro |
| Ile | Glu | Lys 115 | Thr | Ile | Ser | Lys | Ala 120 | Lys | Gly | Gln | Pro | Arg 125 | Glu | Pro | Gln |
| Val | Tyr 130 | | Leu | Pro | Pro | Ser 135 | Arg | Asp | Glu | Leu | Thr 140 | Lys | Asn | Gln | Val |
| Ser 145 | Leu | Thr | Cys | Leu | Val 150 | Lys | Gly | Phe | Tyr | Pro 155 | Ser | Asp | Ile | Ala | Val 160 |
| Glu | Trp | Glu | Ser | Asn 165 | Gly | Gln | Pro | Glu | Asn 170 | Asn | Tyr | Lys | Thr | Thr 175 | Pro |
| Pro | Val | Leu | Asp 180 | Ser | Asp. | Gly | Ser | Phe 185 | Phe | Leu | Tyr | Ser | Lys 190 | Leu | Thr |
| Val | Asp | Lys 195 | Ser | Arg | Trp | Gln | Gln 200 | Gly | Asn | Val | Phe | Ser 205 | Cys | Ser | Val |
| Met | His 210 | Glu | Ala | Leu | His | Asn 215 | His | Tyr | Thr | Gln | Lys 220 | Ser | Leu | Ser | Leu |
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3

Ser Pro Gly Lys
225

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Arg Ala
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| tcta | agati | ttg : | tttt | aact | aa t | taaa | ggag | g aa | taac | at a | tg g | ac a | aa a | ct c | ac aca | 56 |
| | | | | | | | | | | M | et A | sp L | ys T | hr H | is Thr | |
| | | | | | | | | | | | 1 | | | | 5 | |
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| - | Pro | | - | | - | _ | - | | _ | | | _ | | - | | |
| Cys | 110 | 110 | 10 | 110 | ALG | 110 | GIU | 15 | | 017 | CLJ | | 20 | | | |
| | | | 10 | | | | | 13 | | | | | 20 | | | |
| | | | | | | | | | | | | L | | | | 150 |
| | ttc | | | | | | | | | | | | | | | 152 |
| Leu | Phe | Pro | Pro | Lys | Pro | Lys | Asp | Thr | Leu | Met | Ile | | Arg | Thr | PLO | |
| , | | 25 | | | | | 30 | | | | | 35 | | | | |
| | | | | | | | | | | | | | | | | |
| gag | gtc | aca | tgc | gtg | gtg | gtg | gac | gtg | agc | cac | gaa | gac | cct | gag | gtc | 200 |
| Glu | Val | Thr | Cys | Val | Val | Val | Asp | Val | Ser | His | Glu | Asp | Pro | Glu | Val | |
| | 40 | | | | | 45 | | | | | 50 | | | | | |
| | | | | | | | | | | | | | | | | |
| aaσ | ttc | aac | Łασ | tac | ata | gac | aac | ata | gag | ata | cat | aat | acc | aag | aca | 248 |
| | Phe | | | | | | | | | | | | | | | |
| .22 | 1110 | 11011 | | -3- | 60 | ייסה | O±3 | | | 65 | | | | | 70 | |
| 23 | | | | | 00 | | | | | 0.5 | | | | | , , | |
| | | | | | | | | | | . | | | | | | 206 |
| | ccg | | | | | | | | | | | | | | | 296 |
| Lys | Pro | Arg | Glu | | Gln | Tyr | Asn | Ser | | Tyr | Arg | vaı | vaı | | var | |
| | | | | 75 | | | | | 80 | | | | | 85 | | |
| | | | | | | | | | | | | | | • | | |
| ctc | acc | gtc | ctg | cac | cag | gac | tgg. | ctg | aat | ggc | aag | gag | tac | aag | tgc | 344 |
| Leu | Thr | Val | Leu | His | Gln | Asp | Trp | Leu | Asn | Gly | Lys | Glu | Tyr | Lys | Cys | |
| | | | 90 | | | | | 95 | | | | | 100 | | | |
| | | | | | | | | | | | | | | | | |
| aag | gtc | tcc | aac | aaa | gcc | ctc | cça | gcc | ccc | atc | gag | aaa | acc | atc | tcc | 392 |
| Lvs | Val | Ser | Asn | Lvs | Ala | Leu | Pro | Ala | Pro | Ile | Glu | Lys | Thr | Ile | Ser | |
| • | | 105 | | • | | | 110 | | | | | 115 | | | | |
| | | | | | | | | | | | | | | | | |
| 222 | gcc | 222 | ~~~ | C2.C | 000 | <i></i> | ~22 | cca | cad | ata | tac | acc | cta | ccc | cca | 440 |
| | | | | | | | | | | | | | | | | |
| гÃя | Ala | гЛЯ | GTA | GIN | PLO | | GIU | PIO | GTII | val | | 1111 | neu | FIO | FIO | |
| | 120 | | | | | 125 | | | | | 130 | | | | | |
| | | | | | | | | | | | | | | | | |
| | cgg | | | | | | | | | | | | | | | 488 |
| Ser | Arg | qsA | Glu- | Leu | Thr | Lys | Asn | Gln | Val | Ser | Leu | Thr | Cys | Leu | Val | |
| 135 | | | | | 140 | | | | | 145 | | | | | 150 | |
| | | | | | | | | | | | | | | | | |
| aaa | ggc | ttc | tat | ccc | agc | gac | atc | gcc | gtg | gag | tgg | gag | agc | aat | ggg | 536 |
| | Gly | | | | | | | | | | | | | | | |
| _,, | 1 | | -1- | 155 | ~~. | | | | 160 | | | | | 165 | _ | |

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp

cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac 584

175 180 170 ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp 185 cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His 205 200 aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa ggt gga Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly 220 ggt ggt ggt atc gaa ggt ccg act ctg cgt cag tgg ctg gct gct cgt 776 Gly Gly Gly Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg 240 235 794 gct taatctcgag gatcc Ala <210> 6 <211> 247 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence:Fc-TMP <400> 6 Met Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu 5 10 Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu 20 Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser 40 35 His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu 55 50

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro

100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr 180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu 210 215 220

Ser Pro Gly Lys Gly Gly Gly Gly Gly Ile Glu Gly Pro Thr Leu Arg 225 230 235 240

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<222> (39)..(842)

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Met Asp Lys Thr His Thr

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|---|-------------------|--|--|--|--|--|--|---|-----|
| | ttc Phe | | | | | | | | 152 |
| | gtc Val 40 | | | | | | | • | 200 |
| | ttc Phe | | | | | | | | 248 |
| | ccg Pro | | | | | | | | 296 |
| | acc Thr | | | | | | | | 344 |
| | gtc Val | | | | | | | | 392 |
| | gcc Ala 120 | | | | | | | | 440 |
| | cgg Arg | | | | | | | | 488 |
| | ggc Gly | | | | | | | | 536 |
| | ccg Pro | | | | | | | | 584 |
| | tcc Ser | | | | | | | | 632 |

| _ | cag Gln 200 | | | _ | | | | | | | | | | | | 680 |
|---|---|--------------------|-------------------------|-------------------------------|------------------------|--------------------------------|-------------------------|-------------------------|--------------------------------|------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|--------------------------|-----|
| | cac His | | | | | | | | | | | | | | | 728 |
| | ggt Gly | | | _ | | _ | | - | | | | - | _ | _ | - | 776 |
| | ggt Gly | | | | | | | | | | | | | | | 824 |
| | tgg Trp | | - | - | - | gcat | taato | ctc (| gagga | atcc | 3 | | | | | 861 |
| <21: | 0> 8 1> 2(2> PI | RT | | | | | | | | | | | | | | |
| | 3> A1 3> De | | cial ptic | | _ | | cial | Sequ | ience | e:Fc- | TMP - | TMP | | | | |
| <223 | | | | | _ | | cial | Sequ | ience | e:Fc- | TMP - | TMP | | | | |
| <223 <40 | 3> De | escri | ptic | on of | E Art | ific | | | | | | | Glu | Leu 15 | Leu | |
| <223 <400 Met 1 | 3> De 0> 8 | escri Lys | ptic Thr | n of His 5 | Art Thr | cys | Pro | Pro | Cys 10 | Pro | Ala | Pro | | 15 | | |
| <223 | 3> De 0> 8 Asp | Lys Pro | Thr Ser | His 5 Val | Thr Phe | :ific Cys Leu | Pro | Pro Pro 25 | Cys 10 Pro | Pro Lys | Ala Pro | Pro Lys | Asp 30 | 15 Thr | Leu | |
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| <22: <400 Met 1 Gly Met | 3> De 0> 8 Asp Gly Ile | Lys Pro Ser 35 | Thr Ser 20 Arg | His 5 Val Thr | Thr Phe Pro | Cys Leu Glu Lys 55 | Pro Phe Val 40 | Pro 25 Thr | Cys 10 Pro Cys | Pro Lys Val | Ala Pro Val Val 60 | Pro Lys Val 45 Asp | Asp 30 Asp Gly | 15 Thr Val | Leu Ser Glu | |
| <22: <400 Met 1 Gly Met His | 3> De D> 8 Asp Gly Ile Glu 50 | Lys Pro Ser 35 Asp | Thr Ser 20 Arg Pro | His 5 Val Thr Glu | Thr Phe Pro Val Thr 70 | Cys Leu Glu Lys 55 | Pro Phe Val 40 Phe | Pro 25 Thr Asn | Cys 10 Pro Cys Trp | Pro Lys Val Tyr Glu 75 | Ala Pro Val Val 60 | Pro Lys Val 45 Asp | Asp 30 Asp Gly Asn | 15 Thr Val Val | Leu Ser Glu Thr | |

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr 180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val 195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu 210 215 220

Ser Pro Gly Lys Gly Gly Gly Gly Gly Ile Glu Gly Pro Thr Leu Arg 225 230 235 240

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Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg 260 265

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| | | | 10 | | | | | 15 | | | | | 20 | | | |
| | | | | | | | | | | | | | | | | |
| ggc | att | gag | ggc | cca | acc | ctt | cgc | caa | tgg | ctt | gca | gca | cgc | gca | ggg | 152 |
| | Ile | | | | | | | | | | | | | | | |
| - | | 25 | | | | | 30 | | | | | 35 | | | - | |
| | | | | | | | | | | | | | | | | |
| gga | ggc | ggt | aaa | gac | aaa | act | cac | aca | tgt | cca | cct | tgc | cca | gca | cct | 200 |
| | Gly | | | | | | | | | | | | | | | |
| 2 | 40 | 4 | | - | - | 45 | | | _ | | 50 | | | | | |
| | | | | | | | | | | | | | | | | |
| gaa | ctc | cta | aaa | ада | cca | tca | att | ttc | ctc | ttc | ccc | cca | aaa | ccc | aag | 248 |
| | Leu | | | | | | | | | | | | | | | |
| 55 | | 204 | U | | 60 | | | | | 65 | | | • | | 70 | |
| J.J. | | | | | • | | | | | | | | | | | |
| 727 | acc | ctc | ata | atc | tcc | caa | acc | cct | σaσ | atc | aca | tac | ata | ata | ata | 296 |
| | Thr | | | | | | | | | | | | | | | |
| ASD | THE | Leu | mec | 75 | PET | nry | 1111 | 110 | 80 | | | 0 10 | | 85 | | |
| | | | | 75 | | | | | 00 | | | | | •• | | |
| | gtg | | | | | ~~+ | ~~~ | a+a | 227 | tta | 220 | taa | tac | ata | gac | 344 |
| gac | gtg | agc | cac | gaa | gac | CCL | gay | 1701 | Tera | Dha | Aan | mrn | There | y cy | Aan | 341 |
| Asp | Val | ser | | GIU | Asp | Pro | GIU | | nys | FIIE | Mon | ırp | 100 | Val | vaħ | |
| | | | 90 | | | | | 95 | | | | | 100 | | | |
| | | | | | | | | | | | | | | | | 392 |
| | gtg | | | | | | | | | | | | | | | 374 |
| Gly | Val | | Val | His | Asn | Ala | | Thr | Lys | Pro | Arg | | GIU | GIN | TYT | |
| | | 105 | | | | | 110 | | | | | 115 | | | | |
| | | | | | | | | | | | | | | | | 440 |
| | agc | | | | | | | | | | | | | | | 440 |
| Asn | Ser | Thr | Tyr | Arg | Val | Val | Ser | Val | Leu | Thr | | Leu | His | Gln | Asp | |
| | 120 | | | | | 125 | | | | | 130 | | | | | |
| | | | | | | | | | | | | | | | | |
| | ctg | | | | | | | | | | | | | | | 488 |
| Trp | Leu | Asn | Gly | Lys | Glu | Tyr | Lys | Cys | Lys | Val | Ser | Asn | Lys | Ala | Leu | |
| 135 | | | | | 140 | | | | | 145 | | | | | 150 | |
| | | | | | | | | • | | | | | | | | |
| cca | gcc | ccc | atc | gag | aaa | acc | atc | tcc | aaa | gcc | aaa | ggg | cag | CCC | cga | 536 |
| Pro | Ala | Pro | Ile | Glu | Lys | Thr | Ile | Ser | Lys | Ala | Lys | Gly | Gln | Pro | Arg | |
| | | | | 155 | | | | | 160 | | | | | 165 | | |
| | | | | | | | | | | | | | | | | |
| gaa | cca | cag | ata | tac | acc | ctg | ccc | cca | tcc | cgg | gat | gag | ctg | acc | aag | 584 |
| Glu | Pro | Gin | Val | Tvr | Thr | Leu | Pro | Pro | Ser | Arg | Asp | Glu | Leu | Thr | Lys | |
| | | | 170 | -3- | | | | 175 | | Ĩ | = | | 180 | | | |
| | | | | | | | | | | | | | | *** | * rijenn | - |
| 220 | cag | atc | 'adc | ata | acc | tac | cta | atc | aaa | aac | ttc | tat | ccc | agc | gac | 632 |
| 2ac | Gln | 77-7 | Ga- | Len | Thr | Cara | I,en | Val | Lvs | Glv | Phe | Tvr | Pro | Ser | Asp | |
| nsn | GIU | AGT | Set | neq. | *117 | CYS | me. | · u.z | <i>د</i> ړ ــ | 1 | | -2- | | | - | |

185 190 195 atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag 680 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys 200 205 acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser 215 220 225 230. aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca 776 Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser 235 240 tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc 824 Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser 250 255 260 ctc tcc ctg tct ccg ggt aaa taatggatcc 855 Leu Ser Leu Ser Pro Gly Lys 265 <210> 10 <211> 269 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: TMP-TMP-Fc Met Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Gly 5 10 Gly Gly Gly Gly Gly Gly Ile Glu Gly Pro Thr Leu Arg Gln Trp 20 Leu Ala Ala Arg Ala Gly Gly Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu 55 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys

70

85

65

75

90

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
100 105 110

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu 115 120 125

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys 130 135 140

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys 145 150 155 160

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser 165 170 175

Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys 180 185 190

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
195 200 205

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly 210 215 220

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln 225 230 235 240

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn 245 250 255

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
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<222> (39)~.(779)

<400> 11

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|------|------|------------|------|------|------------|------|-------|-------------|------|-----------|-----|-----|------|------|---------------------|-------|
| | | | | | | | | | | | | | | | | |
| ctg | cgt | cag | tgg | ctg | gct | gct | cgt | gct | ggt | gga | ggc | ggt | ggg | gac | aaa | 104 |
| | | Gln | | | | | | | | | | | | | | |
| | _ | | 10 | | | | | 15 | | | | | 20 | | | |
| | | | | | | | | | | | | | | | | |
| | | aca | | | | | | | | | | | | | | 152 |
| Thr | His | Thr | Суз | Pro | Pro | Cys | Pro | Ala | Pro | Glu | Leu | Leu | Gly | Gly | Pro | |
| | | 25 | - | | | | 30 | | | | | 35 | | | | |
| | | | | | | | | | | | | | | | | |
| | | ttc | | | | | | | | | | | | | | 200 |
| Ser | Val | Phe | Leu | Phe | Pro | | Lys | Pro | Lys | Asp | | Leu | Met | IIe | Ser | |
| | 40 | | | | | 45 | | | | | 50 | | | | | |
| | | | | | | L | | ~+ <i>~</i> | ata | 72 | ata | 200 | cac | gaa. | aac | 248 |
| cgg | acc | cct Pro | gag | gec | aca mh- | Crra | y . y | y Ly Val | Val | Agn | Val | Ser | Hig | Glu | Asn | 2.0 |
| _ | THE | PIO | GIU | var | 60 | Cys | Vai | Val | Val | 65 | vai | 501 | **** | | 70 | |
| 55 | | | | | 00 | | | | | vs | | | | | | |
| cct | gag | gtc | aac | ttc | aac | taa | tac | ata | gac | ggc | gtg | gag | gtg | cat | aat | 296 |
| | | Val | | | | | | | | | | | | | | |
| | | | | 75 | | | - | | 80 | _ | | | | 85 | • | |
| | | | | | | | | | | | | | | | | |
| gcc | aag | aca | aag | ccg | cgg | gag | gag | cag | tac | aac | agc | acg | tac | cgt | gtg | 344 |
| | | Thr | | | | | | | | | | | | | | |
| | | | 90 | | | | | 95 | | | | | 100 | | | |
| | | | | | | | | | | | | | | | | |
| | | gtc | | | | | | | | | | | | | | 392 |
| Val | Ser | Val | Leu | Thr | Val | Leu | His | Gln | Asp | Trp | Leu | | Gly | Lys | Glu | |
| | | 105 | | | | | 110 | | | | | 115 | | | | |
| _ | | | | | | | | | | | ~~~ | aca | 2+0 | asa | 222 | 440 |
| | | tgc | | | | | | | | | | | | | | 110 |
| Tyr | | Cys | гÀз | vaı | ser | | | MIG | пеп | FIO | 130 | FLO | 116 | | 2,5 | |
| | 120 | | | | | 125 | | | | | 130 | | | | | |
| acc | atc | tcc | 222 | acc | aaa | aaa | cag | ccc | cga | σaa | cca | cag | gtg | tac | acc | 488 |
| Thr | Tle | Ser | Lvs | Ala | Lvs | Glv | Gln | Pro | Arg | Glu | Pro | Gln | Val | Tyr | Thr | |
| 135 | | | _,_ | | 140 | 2 | | | | 145 | | | | | 150 | |
| | | | | | | | | | | | | | | | | |
| ctg | ccc | cca | tcc | cgg | gat | gag | ctg | acc | aag | aac | cag | gtc | agc | ctg | acc | 536 |
| Leu | Pro | Pro | Ser | Arg | Asp | Glu | Leu | Thr | Lys | Asn | Gln | Val | Ser | Leu | Thr | |
| | | | | 155 | | | | | 160 | | | | | 165 | | |
| | | | | | | | | | | | | | | | | E C 4 |
| tgc | ctg | gtc | aaa | ggc | ttc | tat | ccc | agc | gac | atc | gcc | gtg | gag | tgg | gag | 584 |
| Cys | Leu | Val. | | Gly | Phe | Tyr | Pro | | Asp | Ile | Ala | Val | Glu | Trp | GTA. | |
| | | | 170 | | | | | 175 | | | | | 180 | | | |

| agc aat Ser Asi | | | | | | | | | | | | | | | 632 |
|---|----------------------|-------------------------|-------------------------------|---------------------|--------------------------|-------------------------|--------------------|---------------------------------------|---------------------------------------|--------------------------------|-------------------------|-------------------------|-------------------------|--------------------|-----|
| gac tcc Asp Ser 200 | : Asp | | | | | | | | | | | | | - | 680 |
| agc agg Ser Arg 215 | | | | | | | | | | | | | | - | 728 |
| gct ctc | | | | | _ | _ | - | _ | | | _ | | _ | | 776 |
| aaa taa Lys | tgga | tcc | | | | | | | | | | | | | 789 |
| <210> 1 <211> 2 <212> E | 47 PRT | | | | | | | | | | | | | | |
| <213> A <223> I | | | | _ | | cial | Sequ | ience | e:TME | P-Fc | | | | | |
| | escri | iptic | on of | Art | ific | | _ | | | | Ala | Arg | Ala 15 | Gly | • |
| <223> II <400> 1 Met Ile | escri .2 : Glu | iptic Gly | Pro | Art Thr | ific Leu | Arg | Gln | Trp 10 | Leu | Ala | • | | 15 | | |
| <223> I <400> 1 Met Ile | e Glu | Gly Gly 20 | Pro 5 Asp | Thr | Leu Thr | Arg His | Gln Thr 25 | Trp 10 Cys | Leu Pro | Ala Pro | Cys | Pro 30 | 15 Ala | Pro | |
| <223> I <400> 1 Met Ile 1 Gly Gly | e Glu Gly Leu 35 | Gly Gly 20 Gly | Pro 5 Asp | Thr Lys | Leu Thr | Arg His Val 40 | Gln Thr 25 | Trp 10 Cys Leu | Leu Pro Phe | Ala Pro | Cys Pro 45 | Pro 30 Lys | 15 Ala Pro | Pro Lys | |
| <223> II <400> 1 Met Ile 1 Gly Gly Glu Leu Asp Thr | Gly Leu 35 | Gly Gly 20 Gly Met | Pro 5 Asp Gly | Thr Lys Pro | Leu Thr Ser Arg | Arg His Val 40 | Gln Thr 25 Phe | Trp 10 Cys Leu Glu | Leu Pro Phe Val | Ala Pro Pro Thr 60 | Cys Pro 45 Cys | Pro 30 Lys Val | 15 Ala Pro Val | Pro Lys Val | |
| <223> II <400> 1 Met Ile 1 Gly Gly Glu Leu Asp Thr 50 Asp Val | Gly Leu 35 Leu Ser | Gly Gly 20 Gly Met | Pro 5 Asp Gly Ile | Thr Lys Pro Ser Asp | Leu Thr Ser Arg 55 | Arg His Val 40 Thr | Gln Thr 25 Phe Pro | Trp 10 Cys Leu Glu Lys | Leu Pro Phe Val Phe 75 | Ala Pro Pro Thr 60 Asn | Cys Pro 45 Cys Trp | Pro 30 Lys Val | 15 Ala Pro Val | Pro Lys Val Asp 80 | |

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu 115 120 125

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg 130 135 140

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys
145 150 155 160

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp 165 170 175

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys 180 185 190

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser 195 200 205

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser 210 215 220

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser 225 230 235 240

Leu Ser Leu Ser Pro Gly Lys 245

<210> 13

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TMP

<400> 13

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala 1 5 10

<210> 14

<211> 36

<212> PRT

<213> Artificial Sequence

<220> <223> Description of Artificial Sequence: TMP-TMP <400> 14 Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Gly Gly Gly Gly Gly Gly Gly Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu 25 Ala Ala Arg Ala 35 <210> 15 <211> 812 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence:Fc-EMP <220> <221> CDS <222> (39)..(797) <400> 15 tctagatttg ttttaactaa ttaaaggagg aataacat atg gac aaa act cac aca 56 Met Asp Lys Thr His Thr tgt cca cct tgt cca gct ccg gaa ctc ctg ggg gga ccg tca gtc ttc Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe 15 10 ete tte eec eca aaa eec aag gae ace ete atg ate tee egg ace eet Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro 25 gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc 200 Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val 50 45 40 aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca 248

60

55

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr

| aag Lys | ccg Pro | cgg Arg | gag Glu | gag Glu 75 | cag Gln | tac Tyr | aac Asn | agc Ser | acg Thr 80 | tac Tyr | cgt Arg | gtg Val | gtc Val | agc Ser 85 | gtc Val | 296 |
|-------------------|-----------------------|-------------------|--------------------|----------------------|-----------------------|-----------------------|-------------------|------------------|----------------------|-----------------------|-----------------------|---------------------|-------------------|--------------------|-----------------------|-----|
| ctc Leu | acc Thr | gtc Val | ctg Leu 90 | cac His | cag Gln | gac Asp | tgg Trp | ctg Leu 95 | aat Asn | ggc Gly | aag Lys | gag Glu | tac Tyr 100 | aag Lys | tgc Cys | 344 |
| aag Lys | gtc Val | tcc Ser 105 | aac Asn | aaa Lys | gcc Ala | ctc Leu | cca Pro 110 | gcc Ala | ccc Pro | atc Ile | gag Glu | aaa Lys 115 | acc Thr | atc Ile | tcc Ser | 392 |
| aaa Lys | gcc Ala 120 | aaa Lys | Gly | cag Gln | ccc Pro | cga Arg 125 | gaa Glu | cca Pro | cag Gln | gtg Val | tac Tyr 130 | acc Thr | ctg Leu | ccc Pro | cca Pro | 440 |
| tcc Ser 135 | cgg Arg | gat Asp | gag Glu | ctg Leu | acc Thr 140 | aag Lys | aac Asn | cag Gln | gtc Val | agc Ser 145 | ctg Leu | acc Thr | tgc Cys | ctg Leu | gtc Val 150 | 488 |
| aaa Lys | ggc Gly | ttc Phe | tat Tyr | ccc Pro 155 | agc Ser | gac Asp | atc Ile | gcc Ala | gtg Val 160 | gag Glu | tgg Trp | gag Glu | agc Ser | aat Asn 165 | ggg | 536 |
| cag Gln | ccg Pro | gag Glu | aac Asn 170 | Asn | tac Tyr | aag Lys | acc | acg Thr | Pro | ccc Pro | gtg Val | ctg Leu | gac Asp 180 | Ser | gac Asp | 584 |
| G17 | tcc Ser | tto Pho | e Phe | ctc Leu | tac Tyr | ago Ser | aag Lys | Leu | acc Thr | gtg Val | gac Asr | : aag Lys 195 | 361 | agg | tgg Trp | 632 |
| caq Gl: | g caq a Glr 200 | ı Gl | g aad y Asi | gto Nal | tto Phe | : tca : Se: 20: | Cys | c tcc s Ser | gtç Val | g ato L∙Met | g cat : His 210 | 3 GI | gct Ala | cto Leu | g cac 1 His | 680 |
| aa As: 21 | n Hi | c ta s Ty | c ac | g caq r Gli | g aaq n Lys 220 | s Se | c cto | c tco u Sei | c cto | g tci 1 Sei 22! | PI | g ggt o Gly | aaa Y Ly: | a gg | t gga y Gly 230 | 728 |
| gg G1 | t gg y Gl | t gg y Gl | t gg y Gl | a gg y G1; 23! | y Th | t ta r Ty | c tc r Se | t tge r Cy | c cae s Hi: 24 | s Pn | c gg e Gl | c cc | g ct | g ac u Th 24 | t tgg r Trp 5 | 776 |
| gt Va | t tg 1 Cy | c aa | a co s Pr 25 | g ca o Gl | g gg n Gl | t gg y Gl | t ta Y | atct | cgtg | gat | cc | | | u September | - | 812 |

<210> 16

<211> 253

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence:Fc-EMP

<400> 16

Met Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu 10

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu 20

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Asp Val Ser 40

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu 55

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr 70 65

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn 90 85

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro 105 100

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln 120 115

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 135

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 150

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 170 165

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr 185 180

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val 205 200 195

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu

210 215 220

Ser Pro Gly Lys Gly Gly Gly Gly Gly Gly Gly Thr Tyr Ser Cys His 225 230 235 240

Phe Gly Pro Leu Thr Trp Val Cys Lys Pro Gln Gly Gly 245 250

<210> 17

<211> 807

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: EMP-Fc

<220>

<221> CDS

<222> (39)..(797)

<400> 17

tctagatttg ttttaactaa ttaaaggagg aataacat atg gga ggt act tac tct 56

Met Gly Gly Thr Tyr Ser

tgc cac ttc ggc ccg ctg act tgg gta tgt aag cca caa ggg ggt ggg 104 Cys His Phe Gly Pro Leu Thr Trp Val Cys Lys Pro Gln Gly Gly Gly 10 15 20

gga ggc ggg ggg gac aaa act cac aca tgt cca cct tgc cca gca cct 152
Gly Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
25 30 35

gaa ctc ctg ggg gga ccg tca gtt ttc ctc ttc ccc cca aaa ccc aag 200
Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
40 45 50

gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg 248
Asp Thr Leu Met'lle Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
55 60 65 70

gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac 296
Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
75 80 85

ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac 344

| Gly | Val | Glu | Val 90 | His | Asn | Ala | Lys | Thr 95 | Lys | Prò | Arg | Glu | Glu 100 | Gln | Tyr | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| aac Asn | agc Ser | acg Thr 105 | tac Tyr | cgt Arg | gtg Val | gtc Val | agc Ser 110 | gtc Val | ctc Leu | acc Thr | gtc Val | ctg Leu 115 | cac | cag Gln | gac Asp | 392 |
| tgg Trp | ctg Leu 120 | aat Asn | ggc Gly | aag Lys | gag Glu | tac Tyr 125 | aag Lys | tgc Cys | aag Lys | gtc Val | tcc Ser 130 | aac Asn | aaa Lys | gcc Ala | ctc Leu | 440 |
| cca Pro 135 | gcc Ala | ccc Pro | atc Ile | gag Glu | aaa Lys 140 | acc Thr | atc Ile | tcc Ser | aaa Lys | gcc Ala 145 | aaa Lys | ggg Gly | cag Gln | ccc Pro | cga Arg 150 | 488 |
| gaa Glu | cca Pro | cag Gln | gtg Val | tac Tyr 155 | acc Thr | ctg Leu | ccc Pro | cca Pro | tcc Ser 160 | cgg Arg | gat Asp | gag Glu | ctg Leu | acc Thr 165 | aag Lys | 536 |
| aac Asn | cag Gln | gtc Val | agc Ser 170 | ctg Leu | acc Thr | tgc Cys | ctg L eu | gtc Val 175 | aaa Lys | ggc | ttc Phe | tat Tyr | ccc Pro 180 | agc Ser | gac Asp | 584 |
| atc Ile | gcc Ala | gtg Val 185 | gag Glu | tgg Trp | gag Glu | agc Ser | aat Asn 190 | Gly | cag Gln | ccg Pro | gag Glu | aac Asn 195 | Asn | tac Tyr | aag Lys | 632 |
| acc | acg Thr 200 | Pro | ccc | gtg Val | ctg Leu | gac Asp 205 | tcc Ser | gac Asp | ggc | tcc Ser | ttc Phe 210 | Phe | ctc Leu | tac Tyr | agc Ser | 680 |
| aag Lys 215 | Leu | acc Thr | gtg Val | gac Asp | aag Lys 220 | Ser | agg Arg | tgg Trp | cag Gln | cag Gln 225 | Gly | aac Asn | gtc Val | ttc Phe | tca Ser 230 | 728 |
| tgc Cys | tcc Ser | gtg Val | atg Met | cat His 235 | Glu | gct Ala | ctg Leu | cac His | aac Asn 240 | His | tac Tyr | acg | cag Gln | aag Lys 245 | agc Ser | 776 |
| | tcc Ser | | | Pro | | | | tgga | tcc | | | | | | | 807 |

<210> 18 <211> 253 <212> PRT <213> Artificial Sequence

PCT/US99/25044 WO 00/24782

<223> Description of Artificial Sequence: EMP-Fc

| | _ | _ | | _ | _ |
|------|---|---|---|---|---|
| <4 | n | n | • | 1 | ч |
| ~ ** | u | u | _ | _ | u |

- Met Gly Gly Thr Tyr Ser Cys His Phe Gly Pro Leu Thr Trp Val Cys
- Lys Pro Gln Gly Gly Gly Gly Gly Gly Asp Lys Thr His Thr Cys
- Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
- Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
- Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
- Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
- Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
- Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
- Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
- Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
- Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
- Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
- Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
- Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
- Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys 245

| :210> | 19 | | | | | | | | | | | | | | | |
|----------------|-------|------|-------|-------|-------|-------|------|-------|-------|-----|------------|-------|----------|-------|--------------|-----|
| ·211> | | | | | | | | | | | | | | | | |
| <212> | | | | | | | | | | | | | | | | |
| <213> | | | ial | Segu | ence | 1 | | | | | | | | | - | |
| -213- | | | | | | | | | | | | | | | | |
| <220> | | | | | | | | | | | | | | | | |
| <223> | Des | crit | tion | of | Arti | fici | al S | Seque | ence: | EMP | - EMP - | FC | | | | |
| ~225- | | | | | | | | | | | | | | | | |
| <220> | | | | | | | | | | | | | | | | |
| <221> | | 3 | | | | | | | | | | | | | | |
| <222> | | | (871) |) | | | | | | | | | | | | |
| | • | • | | | | | | | | | | | | | | |
| <400> | > 19 | | | | | | | | | | | | | _ | | 55 |
| <4002 tctag | ratti | tg a | gttt | taact | t tti | agaa | agga | gga | ataaa | aat | atg q | gga (| ggt | act | tac m | 33 |
| | • | | - | | | | | | | | Met (| Gly (| Gly | Thr | | |
| | | | | | | | | | | | 1 | | | | 5 | |
| | | | | | | | | | | | | | | | | 103 |
| tct | tac | cac | ttc | ggc (| cca | ctg : | act | tgg | gtt | tgc | aaa | ccg | cag | ggt | ggc | 103 |
| ser | Cvs | His | Phe | Gly | Pro : | Leu ' | Thr | Trp | Val | Cys | Lys | Pro | Gln | 0-3 | GIA | |
| | | | | 10 | | | | | 15 | | | | | 20 | | |
| | | | | | | | | | | | - | | | | | 151 |
| ggc | aac | aac | ggc | ggt | ggt | acc | tat | tcc | tgt | cat | ttt | ggc | - ccd | ctg | acc | 131 |
| ggc Gly | Glv | Gly | Gly | Gly | Gly | Thr | Tyr | Ser | Cys | His | Phe | Gly | | Leu | THE | |
| 1 | | | 25 | | | | | 30 | | | | | 35 | | | |
| | | | | | • | | | | | | | | | | | 199 |
| taa | qta | tgt | aag | cca | caa | ggg | ggt | ggg | gga | ggc | ggg Gly | ggg | gac | aaa | acc mb= | 190 |
| Tro | Val | Cys | Lys | Pro | Gln | Gly | Gly | Gly | Gly | Gly | Gly | 0+3 | Asp | гĀЗ | Thr | |
| | | 40 | _ | | | | 45 | | | | | 50 | | | | |
| | | | | | | | | | • | | | | | | - ~ 3 | 247 |
| cac | aca | tgt | cca | cct | tgc | cca | gca | cct | gaa | ctc | ctg | ggg | gga | ccg | Cor | 24, |
| His | Thr | Cys | Pro | Pro | Cys | Pro | Ala | Pro | Glu | Leu | nea | Gly | GIĀ | PIO | Ser | |
| | 55 | - | | | | 60 | | | | | 65 | | | | | |
| | | | | | | | | | | | | | | | | 295 |
| att | ttc | ctc | ttc | CCC | cca | aaa | ccc | aag | gac | acc | ctc | atg | atc | e ECC | cgg Arg | 2,5 |
| Val | Phe | Leu | Phe | Pro | Pro | Lys | Pro | Lys | Asp | Thr | Leu | Met | ITE | ser | Arg 85 | |
| 70 | | | | • | 75 | | | | | 80 | | | | | 65 | |
| | | | | | | | | | | | | | | | aat | 343 |
| acc | cct | gag | gtc | aca | tgc | gtg | gtg | gtg | gac | gtg | agc | cac | gaa | . aar | cct Pro | 310 |
| Thr | Pro | Glu | Val | Thr | Cys | Val | Val | Val | Asp | Val | . Ser | His | GIU | ASP | | |
| | | | | 90 | | | | | 95 | | | | | 100 | | |
| | | | | | | | | | | | | | | | | 391 |
| gag | ato | aaq | tto | aac | tgg | tac | gto | gac | ggc | gto | gag | gtg | Cal | . aai | gcc Ala | ÷ |
| Clu | t/al | Lvs | Phe | Asn | Trp | Tyr | Va] | Asp | Gly | Va1 | L Glu | val | . Hl | S ASI | Ala | |

aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgt gtg gtc Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val age gte etc ace gte etg cae cag gae tgg etg aat gge aag gag tae Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc tgc Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

<210> 20 <211> 277 <212> PRT

taatggatcc

<213> Artificial Sequence

<223> Description of Artificial Sequence: EMP-EMP-Fc

<400> 20

Met Gly Gly Thr Tyr Ser Cys His Phe Gly Pro Leu Thr Trp Val Cys
1 5 10 15

Lys Pro Gln Gly Gly Gly Gly Gly Gly Gly Thr Tyr Ser Cys His
20 25 30

Phe Gly Pro Leu Thr Trp Val Cys Lys Pro Gln Gly Gly Gly Gly Gly 35 40 45

Gly Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu 50 55 60

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr 65 70 75 80

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val 85 90 95

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val 100 105 110

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser 115 120 125

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu 130 135 140

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala 145 150 155 160

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro 165 170 175

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln 180 185 190

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala 195 200 205

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr 210 215 220

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu 225 230 235 240

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser 250 245 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser 260 265 Leu Ser Pro Gly Lys 275 <210> 21 <211> 884 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence:Fc-EMP-EMP <220> <221> CDS <222> (39)..(869) <400> 21 tctagatttg ttttaactaa ttaaaggagg aataacat atg gac aaa act cac aca 56 Met Asp Lys Thr His Thr tgt cca cct tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtt ttc 104 Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe 20 10 ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct 152 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro 30 25 gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc 200 Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val 40 45 aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca 248

aag ccg cgg gag gag cag tac aac agc acg tac cgt gtg gtc agc gtc 296

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val

75 80 85

65

70

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr

60

55

| | | gtc Val | | | | | | | | | | | | | | 344 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| | | tcc Ser 105 | | | | | | | | | | | | | | 392 |
| | | aaa Lys | | | | | | | | | | | | | | 440 |
| tcc Ser 135 | arg Arg | gat Asp | gag Glu | ctg Leu | acc Thr 140 | aag Lys | aac Asn | cag Gln | gtc Val | agc Ser 145 | ctg Leu | acc Thr | tgc Cys | ctg Leu | gtc Val 150 | 488 |
| aaa Lys | ggc Gly | ttc Phe | tat Tyr | ccc Pro 155 | agc Ser | gac Asp | atc Ile | gcc Ala | gtg Val 160 | gag Glu | tgg Trp | gag Glu | agc Ser | aat Asn 165 | ggg Gly | 536 |
| cag Gln | ccg Pro | gag Glu | aac Asn 170 | aac Asn | tac Tyr | aag Lys | acc Thr | acg Thr 175 | cct Pro | ccc Pro | gtg Val | ctg Leu | gac Asp 180 | tcc Ser | gac Asp | 584 |
| ggc Gly | tcc Ser | ttc Phe 185 | ttc Phe | ctc Leu | tac Tyr | agc Ser | aag Lys 190 | ctc Leu | acc Thr | gtg Val | gac Asp | aag Lys 195 | agc Ser | agg Arg | tgg Trp | 632 |
| cag Gln | cag Gln 200 | GJA aaa | aac Asn | gtc Val | ttc Phe | tca Ser 205 | tgc Cys | tcc Ser | gtg Val | atg Met | cat His 210 | gag Glu | gct Ala | ctg Leu | cac His | 680 |
| aac Asn 215 | cac His | tac Tyr | acg Thr | cag Gln | aag Lys 220 | agc . Ser | ctc Leu | tcc Ser | ctg Leu | tct Ser 225 | Pro | ggt Gly | aaa Lys | ggt Gly | gga Gly 230 | 728 |
| ggt Gly | ggt Gly | ggc | gga Gly | ggt Gly 235 | act Thr | tac | tct Ser | tgc Cys | cac His 240 | ttc Phe | ggc | cca Pro | ctg Leu | act Thr 245 | tgg Trp | 776 |
| gtt Val | tgc Cys | aaa Lys | ccg Pro 250 | Gln | ggt Gly | ggc | ggc | ggc Gly 255 | ggc | ggc | ggt | ggt Gly | acc Thr 260 | tat Tyr | tcc Ser | 824 |
| tgt Cys | cat His | ttt Phe 265 | Gly | ccg Pro | ctg Leu | acc Thr | tgg Trp 270 | Val | tgt Cys | aag Lys | cca Pro | caa G1n 275 | Gly | ggt Gly | | 869 |

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884

<210> 22

<211> 277

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence:Fc-EMP-EMP

<400> 22

Met Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu 1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu 20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu 50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr 65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro 100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190 ---

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val

195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu 210 215 220

Ser Pro Gly Lys Gly Gly Gly Gly Gly Gly Gly Thr Tyr Ser Cys His 225 230 235 240

Phe Gly Pro Leu Thr Trp Val Cys Lys Pro Gln Gly Gly Gly Gly 245 250 255

Gly Gly Gly Thr Tyr Ser Cys His Phe Gly Pro Leu Thr Trp Val Cys 260 265 270

Lys Pro Gln Gly Gly 275

<210> 23

<211> 1545

<212> DNA

<213> Artificial Sequence

<220>

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<400> 23

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attgtttaac ataagtacct gtaggatcgt acaggtttac gcaagaaaat ggtttgttat 1260
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ggttaacgcg ttggaattcg agctcactag tgtcgacctg cagggtacca tggaagctta 1380
ctcgaggatc cgcggaaaga agaagaagaa gaagaaagcc cgaaaggaag ctgagttggc 1440
tgctgccacc gctgagcaat aactagcata accccttggg gcctctaaac gggtcttgag 1500
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<210> 24
<211> 14
<212> PRT
<213> Artificial Sequence
.<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
       PEPTIDE
<400> 24
Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Lys Ala
                                      10
  1
                   5
<210> 25
<211> 14
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
       PEPTIDE
<400> 25
Ile Glu Gly Pro Thr Leu Arg Glu Trp Leu Ala Ala Arg Ala
                   5
                                      10
  1
<210> 26
<211> 29
<212> PRT
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<220>

<220>

<213> Artificial Sequence

PEPTIDE

<223> Description of Artificial Sequence: TPO-MIMETIC

<223> At position 15, Xaa=a linker sequence of 1 to 20 amino acids

<400> 26

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Xaa Ile
1 5 10 15

Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala
20 25

<210> 27

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<220>

<223> At position 15, Xaa=a linker sequence of 1 to 20 amino acids

<400> 27

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Lys Ala Xaa Ile 1 5 10 15

Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Lys Ala 20 25

<210> 28

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<220>

<223> At position 9 disulfide linkage with residue 24

<220>

<223> At position 24 disulfide linkage with residue 9

<400> 28

Ile Glu Gly Pro Thr Leu Arg Gln Cys Leu Ala Ala Arg Ala Xaa Ile 1 5 10 15

Glu Gly Pro Thr Leu Arg Gln Cys Leu Ala Ala Arg Ala 20 25

<210> 29

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<220>

<223> At position 16 bromoacetyl group linked to sidechain

<400> 29

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Xaa Lys

1 5 10 15

Xaa Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala
20 25 30

<210> 30

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<220>

<223> At position 16 polyethylene glycol linked to sidechain

<400> 30 ...

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Xaa Lys

1 5 10 15

Xaa Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala 20 25 30

<210> 31

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<220>

<223> At position 9 disulfide bond to residue 9 of a separate identical sequence

<400> 31

Ile Glu Gly Pro Thr Leu Arg Gln Cys Leu Ala Ala Arg Ala Xaa Ile 1 5 10 15

Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala 20 25

<210> 32

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<220>

<223> At position 24 disulfide bond to residue 9 of a separate identical sequence

<400> 32

Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala Ala Arg Ala Xaa Ile 1 5 10 15

Glu Gly Prö Thr Leu Arg Gln Cys Leu Ala Ala Arg Ala 20 25

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<210> 33
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 33
Val Arg Asp Gln Ile Xaa Xaa Xaa Leu
<210> 34
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 34
Thr Leu Arg Glu Trp Leu
        . 5
<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 35
Gly Arg Val Arg Asp Gln Val Ala Gly Trp
                  5
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<210> 36

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<211> 10
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 36
Gly Arg Val Lys Asp Gln Ile Ala Gln Leu
                 5
<210> 37
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:Description of
      Artificial SequenceTPO-MIMETIC PEPTIDE
<400> 37
Gly Val Arg Asp Gln Val Ser Trp Ala Leu
<210> 38
<211> 10
<212> PRT
<213> Artificial Sequence
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      PEPTIDE
<400> 38
Glu Ser Val Arg Glu Gln Val Met Lys Tyr
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<210> 39 <211> 10 <212> PRT <213> Artificial Sequence

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<220>
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        PEPTIDE
 <400> 39
 Ser Val Arg Ser Gln Ile Ser Ala Ser Leu
                    5
                                       10
 <210> 40
 <211> 10
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: TPO-MIMETIC
       PEPTIDE
 <400> 40
 Gly Val Arg Glu Thr Val Tyr Arg His Met
   1
                    5
 <210> 41
 <211> 11
 <212> PRT
<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: INTEGRIN
       BINDING PEPTIDE
 <400> 41
 Gly Val Arg Glu Val Ile Val Met His Met Leu
   1
                   5
 <210> 42
 <211> 11
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: TPO-MIMETIC
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PEPTIDE

<400> 42
Gly Arg Val Arg Asp Gln Ile Trp Ala Ala Leu
1 5 10

<210> 43

<211> 11

<212> PRT

<213> Artificial Sequence

<2200>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 43

Ala Gly Val Arg Asp Gln Ile Leu Ile Trp Leu
1 5 10

<210> 44

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<400> 44

Gly Arg Val Arg Asp Gln Ile Met Leu Ser Leu
1 5 10

<210> 45

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<400> 45

Gly Arg Val Arg Asp Gln Ile Xaa Xaa Xaa Leu 1 5 10

<210> 46

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<400> 46

Cys Thr Leu Arg Gln Trp Leu Gln Gly Cys
1 5 10

<210> 47

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<400> 47

Cys Thr Leu Gln Glu Phe Leu Glu Gly Cys
1 5 10

<210> 48

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 48

Cys Thr Arg Thr Glu Trp Leu His Gly Cys
1 5 10

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<210> 49
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
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<400> 49
Cys Thr Leu Arg Glu Trp Leu His Gly Gly Phe Cys
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<210> 50
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:Fc-TMP
<400> 50
Cys Thr Leu Arg Glu Trp Val Phe Ala Gly Leu Cys
<210> 51
<211> 13
<212> PRT
<213> Artificial Sequence
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Cys Thr Leu Arg Gln Trp Leu Ile Leu Leu Gly Met Cys
                                     10
                  5
  1
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 52

Cys Thr Leu Ala Glu Phe Leu Ala Ser Gly Val Glu Gln Cys
1 5 10

<210> 53

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Fc-TMP

<400> 53

Cys Ser Leu Gln Glu Phe Leu Ser His Gly Gly Tyr Val Cys
1 5 10

<210> 54

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Fc-TMP

<400> 54

Cys Thr Leu Arg Glu Phe Leu Asp Pro Thr Thr Ala Val Cys
1 5 10

<210> 55

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC PEPTIDE

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<400> 55
Cys Thr Leu Lys Glu Trp Leu Val Ser His Glu Val Trp Cys
                  5
                                     10
<210> 56
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 56
Cys Thr Leu Arg Glu Trp Leu Xaa Xaa Cys
                  5
<210> 57
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 57
Cys Thr Leu Arg Glu Trp Leu Xaa Xaa Xaa Cys
                 5
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<210> 58
<211> 12
<212> PRT
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<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
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Cys Thr Leu Arg Glu Trp Leu Xaa Xaa Xaa Cys

<400> 58

1 5 10

<210> 59

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 59

Cys Thr Leu Arg Glu Trp Leu Xaa Xaa Xaa Xaa Xaa Cys

<210> 60

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 60

Cys Thr Leu Arg Glu Trp Leu Xaa Xaa Xaa Xaa Xaa Xaa Cys 1 5 10

<210> 61

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 61

Arg Glu Gly Pro Thr Leu Arg Gln Trp Met

1 ... 5 10

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<210> 62
<211> 10
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<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 62
Glu Gly Pro Thr Leu Arg Gln Trp Leu Ala
<210> 63
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: TPO-MIMETIC
      PEPTIDE
<400> 63
Glu Arg Gly Pro Phe Trp Ala Lys Ala Cys
                 5
<210> 64
<211> 10
<212> PRT
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      PEPTIDE
<400> 64
Arg Glu Gly Pro Arg Cys Val Met Trp Met
1
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<210> 65 <211> 14

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<212> PRT
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<213> Artificial Sequence

<220>

<400> 65

Cys Gly Thr Glu Gly Pro Thr Leu Ser Thr Trp Leu Asp Cys
1 5 10

<210> 66

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 66

Cys Glu Gln Asp Gly Pro Thr Leu Leu Glu Trp Leu Lys Cys
1 5 10

<210> 67

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 67

Cys Glu Leu Val Gly Pro Ser Leu Met Ser Trp Leu Thr Cys
1 5 10

<210> 68

<211> 14

<212> PRT ___

<213> Artificial Sequence

<220>

<400> 68

Cys Leu Thr Gly Pro Phe Val Thr Gln Trp Leu Tyr Glu Cys
1 5 10

<210> 69

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 69

Cys Arg Ala Gly Pro Thr Leu Leu Glu Trp Leu Thr Leu Cys
1 5 10

<210> 70

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC PEPTIDE

<400> 70

Cys Ala Asp Gly Pro Thr Leu Arg Glu Trp Ile Ser Phe Cys
1 5 10

<210> 71

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
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<400> 71

Cys Xaa Glu Gly Pro Thr Leu Arg Glu Trp Leu Xaa Cys

1 5 10

<210> 72 <211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
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<400> 72

Cys Xaa Xaa Glu Gly Pro Thr Leu Arg Glu Trp Leu Xaa Cys
1 5 10

<210> 73

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<400> 73

Cys Xaa Glu Gly Pro Thr Leu Arg Glu Trp Leu Xaa Xaa Cys 1 5 10

<210> 74

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<400> 74

Cys Xaa Xaa Glu Gly Pro Thr Leu Arg Glu Trp Leu Xaa Xaa Cys

1 5 10 15

<210> 75

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<400> 75

Gly Gly Cys Thr Leu Arg Glu Trp Leu His Gly Gly Phe Cys Gly Gly

1 5 10 15

<210> 76

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<400> 76

Gly Gly Cys Ala Asp Gly Pro Thr Leu Arg Glu Trp Ile Ser Phe Cys
1 5 10 15

Gly Gly

<210> 77

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<400> 77

Gly Asn Ala Asp Gly Pro Thr Leu Arg Gln Trp Leu Glu Gly Arg Arg

1 5 10 15

Pro Lys Asn

<210> 78

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TPO-MIMETIC PEPTIDE

<400> 78

Leu Ala Ile Glu Gly Pro Thr Leu Arg Gln Trp Leu His Gly Asn Gly

1 5 10 15

Arg Asp Thr

<210> 79

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 79

His Gly Arg Val Gly Pro Thr Leu Arg Glu Trp Lys Thr Gln Val Ala 1 5 10 15

Thr Lys Lys

<210> 80

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 80

Thr Ile Lys Gly Pro Thr Leu Arg Gln Trp Leu Lys Ser Arg Glu His 1 5 10 15

Thr Ser

<210> 81

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:TPO-MIMETIC
 PEPTIDE

<400> 81

Ile Ser Asp Gly Pro Thr Leu Lys Glu Trp Leu Ser Val Thr Arg Gly
1 5 10 15

Ala Ser

<210> 82

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<400> 82

Ser Ile Glu Gly Pro Thr Leu Arg Glu Trp Leu Thr Ser Arg Thr Pro 1 5 10 15

His Ser

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<210> 83
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<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:EPO-MIMETIC
 PEPTIDE

<400> 83

Tyr Xaa Cys Xaa Xaa Gly Pro Xaa Thr Trp Xaa Cys Xaa Pro 1 5 10

<210> 84

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<400> 84

Tyr Xaa Cys Xaa Xaa Gly Pro Xaa Thr Trp Xaa Cys Xaa Pro Tyr Xaa 1 5 10 15

Cys Xaa Xaa Gly Pro Xaa Thr Trp Xaa Cys Xaa Pro 20 25

<210> 85

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:EPO-MIMETIC
 PEPTIDE

<220>

<223> At position 15, Xaa=a linker sequence of 1 to 20 amino acids

<400> 85